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ABSTRACT

The "Trouble Shooting" Checklist (TSC) for Higher Educational Settings has been developed to assist educational change agents, faculty, and administrators concerned with change, in their assessment of organizational variables predictive of a department's potential for successfully adopting innovations. The higher educational based TSC is both diagnostic and predictive. That is, the TSC provides a means of organizing information in a predictive way. In addition, the TSC contains distinct scales that identify particular strengths and weaknesses within a department. This paper provides information on the development of the TSC, reliability, validity, and norms. (Author)

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The "Trouble Shooting" Checklist (TSC)

For Higher Educational Settings

(Manual)

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NATIONAL INSTITUTE OF EDUCATION

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Preface

The "Trouble Shooting" Checklist for Higher-Educational Settings is one of two instruments designed to measure an organization's potential for successfully adopting and implementing educational innovations. In particular, the instrument focuses on a department's organizational climate, staff, communication patterns, innovative experience and students. Another form of the TSC focuses on similar characteristics of elementary and secondary schools (The "Trouble Shooting" Checklist for School-Based Settings).

Research in the area of innovation adoption has primarily focused on three major areas: the adoption-diffusion process; characteristics of innovations which make an innovation easily adopted; and, identifying characteristics of organizations in terms of "innovativeness." This instrument primarily takes advantage of literature in the last category and attempts to tie it in with the real-world experience of change agents. By identifying institutions which are not in a sufficient state of readiness to adopt innovations, the TSC can save potentially wasted time, effort and money. As the development of new educational products and processes is becoming increasingly centralized, the number of programs ready for adoption is rapidly increasing. Many institutions are seeking grants to adopt and implement these innovations without being sufficiently prepared to use the materials as the developer intended. The TSC should be useful for both change agents and in-house personnel in identifying strengths and weaknesses of an organization in relation to the adoption of innovations.

The first form of the TSC (Manning, 1973) was innovation-specific and focused only on higher-educational institutions. Subsequently, there have been three experimental, innovation-free forms of both the higher-educational and school-based TSC's. 120 institutions have been rated on the various experimental forms of the TSC. These experimental forms have resulted in the present two final forms. Since these forms have not been used in experimental or field studies the author invites others to use the TSC in research and development activities.

The development of these instruments was funded through the National Institute of Education, the Procedures for Adopting Educational Innovations/ CBAM Project at the Research and Development Center for Teacher Education, The University of Texas, Austin, Texas. In particular, I want to thank Gene Hall, the project director, for his support, and Ron Fox, Archie George, Sue Loucks, Beulah Newlove, Eddie Parker, Bill Rutherford, and all of the individuals who participated in the data collection. I want to especially thank Donna Buntain who has not only contributed her skills and expertise throughout the entire developmental period, but has provided me with invaluable encouragement and support.

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June, 1976
Austin, Texas

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General Description of the TSC

The "Trouble Shooting" Checklists (TSC's) have been developed to assist educational change agents, and faculty and administrators concerned with change, in their assessment of organizational variables predictive of an institution's potential for successfully adopting innovations. Two final forms of the TSC are now existant: the TSC for school-based settings (K - 12th grades), and the TSC for higher-educational settings (university and college level). This manual focuses on the higher-educational TSC, while another manual is available for the school-based TSC (see Manning, 1976).

The TSC is a diagnostic and predictive instrument designed to aid users in estimating the effects of particular variables on the adoption/diffusion process. That is, the TSC provides users with a means of systematically organizing descriptive information in a predictive way. Because the TSC is broken into five scales, a profile emerges, indicating particular strengths and weaknesses within a department (with respect to the adoption process).

Scales

The TSC consists of 100 Likert-type items which can be broken into the following five scales:

I. Organizational Climate: This scale focuses on the organizational climate within the department. In particular, this scale is concerned with the power system within the department, the kind of behaviors that are reinforced, organizational values and norms, and "openness" of the department.

II. Organizational Staff: This scale focuses on personality and leadership characteristics of faculty and administrators as they are related to the successful adoption of innovations. In particular, this category is concerned with interactions between faculty members, between administrators, and between faculty and administrators. In addition, this category seeks to identify attitudes and interests of the faculty and administration as they are related to innovation.

III. Communications: This scale focuses on the communication process associated with successful adoption and implementation of innovations.

Particular emphasis is placed on the degree to which information exchange is superficial, restricted, or productive. In addition, this category attempts to define the quality of communication between change agents (both internal and external) and the department.

IV. Innovative Experience: This scale focuses on the expertise and degree of sophistication that an institution has had with the adoption and implementation of innovations. Special concern is placed on such factors as the degrees of awareness of basic information about innovations, and indications from the faculty that they have some idea how to integrate an innovation into their teaching.

V. Students: This scale focuses on characteristics of students which can affect the adoption-implementation process. In assessing these characteristics, students' attiutdes towards the faculty, and their course work are considered to be crucial, as well as student enthusiasm, student interaction with peers and faculty, and student individuality.

Theoretical Framework and Origin

The "Trouble Shooting" Checklists have been developed in conjunction with a project which has as its theoretical framework the Concerns-Based Adoption Model (Hall, 1974; Hall, Wallace & Dossett, 1973). In brief, the Concerns-Based Adoption Model (CBAM) focuses on an individual's Stages of Concern about, and Levels of Use of, an innovation. The ordering of concerns and use are postulated to be progressively more sophisticated throughout the adoption-implementation process. The relationship of the TSC to the Concerns-Based Adoption Model is based on the assumption that in order for Stages of Concern and Levels of Use to develop progressively through the adoption-implementation process, an institution must meet certain conditions and be in an appropriate state of readiness. The TSC is designed to aid in predicting and diagnosing an institution's state of readiness.

Uses and Procedures of Administration

Uses of the TSC. The TSC has several major purposes. First, the TSC intends to provide an overall norm-referenced, predictive score which estimates the likelihood of a department to successfully adopt and implement an innovation.

Secondly, the TSC intends to provide a five scale diagnostic profile which focuses on the strengths and weaknesses of a department's environment in relation to the adoption and implementation of innovations.

Within the context of being both a predictive and diagnostic instrument, the TSC may be used by several population groups for several different purposes:

1. Change agents (either internal or external) may use the TSC as a predictive tool to identify institutions which would be most likely to adopt an innovation successfully. Such use of the TSC could assist a change agent or funding agency in determining whether commitments of time and money would be worthwhile in particular departmental settings.

2. Change agents (either internal or external) may use the TSC as a diagnostic tool to obtain information that would help in planning intervention strategies appropriate to a particular department. For example, if a department scored particuarly low on one scale, a change agent could plan interventions which would strengthen the department's particular weakness (e.g., establish new communication networks, etc.).

3. Adminstrators and faculty interested in change may use the TSC to identify problem areas within their department. If a department is considering the adoption of a new program, members could use the TSC to self-evaluate the department and identify strengths and weaknesses which would effect the adoption process.

4. Several members of a department may complete the TSC in order to identify differences in their perceptions of the department. Such evaluation could be catalytic to discussions of problem areas and differences of perception within the department.

5. Educators may use the TSC as an instructional tool to teach change agents or students interested in change, to identify key organizational variables which affect the adoption process.

6. Research organizations may use the TSC to identify highly innovative or noninnovative departments for pilot testing of new programs, in order to measure the effects of the program in varied settings.

Limitations on use. Users should keep in mind that the TSC is a new instrument. While the TSC does have reliability, some indications of validity and norms based on a limited sample, the TSC has not been used extensively in either experimental or field studies. Therefore, the developer cautions users not to rely solely on TSC scores for decision making.

Administration of the TSC. The TSC is easily completed and hand scored

(see scoring section). The respondent is simply required to respond to each descriptive statement on a 1 - 5 scale (ranging from "very typical" to "very atypical"). In addition, the respondent may use either an "NA" or "?" to indicate if an item is Not Applicable to the particular institution (NA), or if s/he does not have the necessary information (?). If a respondent uses a "?" for a response, s/he should try to obtain the needed information before scoring the instrument. Time required to complete the instrument, after an individual has familiarized him/herself with an institition, is estimated to be 20 - 30 minutes. Scoring is estimated to take 15 minutes.

Members of an organization should be able to complete most items based on their knowledge of the institution. External change agents should first study the instrument in order to become completely familiar with the information required to complete the form, and then spend a few days meeting with and interviewing various members of the organization in order to obtain the necessary information. The author urges that interviews be conducted with a variety of people, both receptive and unreceptive, of varying influence in the organization, in order to obtain the most complete impression of the institution. In such interviews, students should not be neglected. They can be a valuable source of information.

Technical Development of the TSC

Origin of the TSC

The early development of the TSC for Higher-Educational Settings has been documented in detail in Manning (1973) and two AERA papers (Manning, 1974; Manning, 1975). In brief, the TSC was first developed as a survey form (TSQ - "Trouble Shooting" Questionnaire), which was used to collect the information upon which the present TSC is based. The TSQ was a twenty-nine page open-ended questionnaire which was completed by six change agents. The questionnaire was innovation-specific, focusing only on institutions adopting modules and personal assessment feedback (PAF). In addition, the questionnaire was broken into ideal, marginal and unacceptable question areas. The questionnaire was given to experienced change agents who wrote sentence and paragraph responses to the questions. These responses were then synthesized to make them as succinct as possible without losing descriptive information. Items were also sorted into natural groupings within each question area. The initial draft of the TSC (Checklist) form, thus, consisted of two innovation-specific instruments, the TSC-A and TSC-B (one instrument for institutions adopting modules and one for institutions adopting PAF). Each instrument had five information areas corresponding to the natural groupings which had emerged. In addition, items were assigned score values of 2, 1, and 0 for items which had been generated from the ideal, marginal and unacceptable question areas on the TSQ.

The first innovation-free form of the TSC for higher-educational settings was based on the TSC-A, TSC-B and a literature search. The first step was to eliminate or modify all items in the TSC-A and TSC-B which specifically referred to modules, counseling or assessment batteries, as well as items which had any innovation-specific referrent. The remaining items were then pooled to form the new instrument. In addition, some items were added based on the literature

search. This first experimental, innovation-free form of the TSC for higher-educational institutions consisted of 495 items classified as describing innovative, marginal or unacceptable organizational characteristics (165 items of each kind). These 495 items were organized into 16 subscales in 5 major scales, and occupied 39 pages. All subscales were forced-choice requiring that 1/3 of the items in any one scale be selected.

This first experimental, innovation-free form of the TSC for higher-educational settings was distributed to a small, nation-wide sample of change agents who were asked to complete the TSC and to critique and comment upon it in detail. In such a way, it was possible to obtain detailed responses from a representative sample of would-be users in addition to obtaining data necessary for the first item analysis. A synthesis of the critiques was compiled and remedial actions outlined.

Based on this sampling procedure, it was decided to narrow the instrument to 100 items formatted in a 5-point Likert-type scale. Consequently, all marginal items were removed except those which correlated highly in the final analysis after having been re-classified as ideal or unacceptable based on one of the analyses.

Initial Item Analysis

A series of item analyses were completed on this first 495 item experimental form of the higher-educational, innovation-free TSC. Information on these analyses is available in Manning (1975).

150 items were selected on the basis of these analyses, and comprised the second experimental form of the higher-educational TSC. These psychometrically sound items were also examined in terms of the detailed comments made by change agents who had completed the checklist. Some items were then rewritten for greater clarity.

In sum, the second experimental form of the higher-educational TSC consisted of the highest correlating 150 items drawn from an original pool of 495 innovation-free items (which, in turn, were based on the TSC-A and TSC-B). Because the format of the TSC was changed to Likert-type scaling, the 150 items were drawn primarily from ideally and unacceptably classified items (only a few marinally classified items were retained). These 150 items could be broken into the following five scales (subscales were eliminated since the number of items was reduced): organizational climate; organizational staff; communications; innovative experience; and, students.

This second experimental form of the higher-educational TSC was submitted to organizational development specialists in order to obtain suggestions for modification of individual items. After final revisions were completed, the third experimental form of the higher-educational TSC emerged. Because of the re-writing of items and the change in format, the higher-educational TSC underwent another series of item analyses before being finalized into its present form. The second series of analyses were used to narrow the number of items down to 100. The analyses which were conducted are described below.

Final Item Analysis

Forty-seven higher-educational personnel were asked to anonymously complete the third experimental form of the higher-educational TSC. Only 30 TSC's were returned in time to be included in the data base for the final item analysis.

The first analysis focused on the following question: do items assigned to one of the two groups of items (items describing innovative institutions, and items describing noninnovative institutions) belong with their respective groups? This analysis consisted of correlations between each item and the total score for each group of items (see Table 1). The alpha coefficients for the two groups of items were as follows: items classified as innovative $\alpha = .96$; items classified

as noninnovative α = .96; and, total α = .98.

The second analysis focused on whether or not items were internally consistent within each of the five scales. This analysis consisted of correlations between each item and each of the total scale scores (see Table 2). One result of this analysis was that the scales demonstrated a lack of independence. These results indicate that institutions which rate highly in one scale are likely to rate highly in other scales as well.

The final analysis, like the second analysis, focused on whether or not items were internally consistent within each scale and within the entire instrument (see Table 3). This analysis resulted in correlations of each item with the total score of the instrument and with its total scale scores. The alpha coefficients for the five scales and total instrument are presented in the table below.

Scale number	Items in scale	Alpha
1	30	.90
2	30	.91
3	30	.94
4	30	.93
5	30	.90
Total	150	.98

Item Selection

The analyses described above provided the basis for the selection of the final 100 TSC items. The selection procedure required the compilation of a detailed summary of the analyses containing each item followed by correlations on each analysis. In such a way, the results of all analyses could be reviewed at once, in order to determine which items correlated highest across the analyses. In addition, items were examined in terms of content. When several individuals failed to respond to a particular item, the item was examined to determine if

it required information that was difficult to obtain, or whether the item required information which was easily obtainable, but unknown to the respondent. In addition, particularly in borderline cases, the content of items was also considered in order to insure that a full range of variables would be represented within each scale.

The final 100 items were then re-analyzed for new alpha coefficients in order to determine the reliability coefficients for the final five scales and total scores. The alphas for the final 100 TSC items are presented in the table below:

Scale Number	Items in scale	Alpha
1	19	.89
2	22	.93
3	19	.94
4	22	.96
5	18	.91
Total	100	.98

Format and Scoring

Format

The TSC consists of 100 descriptive statements. These statements are randomly arranged, and can be broken into the following five scales:

Scale I: Organizational Climate
(Items in this scale describe the work climate and organizational structures of both the department and the institution as a whole.)

Scale II: Organization Staff
(Items in this scale describe personality and leadership styles of faculty and administrators within the department.)

Scale III: Communication
(Items in this scale describe communications both within the department and within the institution as a whole.)

Scale IV: Innovative Experience
(Items in this scale describe a department's experience with innovations and attitudes toward innovation.)

Scale V: Students
(Items in this scale describe student behavior, attitudes, and demographic characteristics.)

Each item is to be rated on a five point scale ranging from "very typical" to "very atypical." A "?" may be used when one doesn't have enough information to respond to an item, and the symbol "NA" may be used when a statement is not applicable to a particular department. The instrument provides five scale scores in addition to a total score.

Scoring

Scoring of the TSC can be done by hand and requires approximately 15 minutes. As explained in detail below, all items which describe noninnovative organizational characteristics must be reverse keyed before the scores are summed. Scores are then added for each scale and for the total instrument. Those respondents who have chosen to use the symbols "NA" and "?" should refer to the Score adjustment formula which provides a formula for equalizing the scores of TSC's in which these symbols were used, with the scores of TSC's in which these symbols

were not used.

Reverse key scoring. The item numbers listed below are reverse keyed, and should have their rating values adjusted in the following manner:

Item response		Reverse score value	
5	=	1	
4	=	2	
3	=	3	(reverse keyed items rated 3 should not be changed)
2	=	4	
1	=	5	
?	=	0	
NA	=	0	

For example, if you have marked one of the following items a "1," it should be changed to a "5" for scoring purposes; if you have marked one of the following items a "4," it should be changed to a "2" for scoring purposes. The following items should be reverse keyed:

1	13	30	43	55	67	81	96
3	18	31	44	57	68	85	97
4	22	32	46	60	73	86	100
5	24	33	47	61	75	87	
6	27	34	48	64	76	91	
7	28	36	51	65	78	92	
11	29	37	52	66	80	93	

Scales. In order to derive each scale score, add the ratings for the respective item numbers listed below (the symbols "?" and "NA" should be assigned 0 score values):

Scale I:	12	30	52	70	84
	15	33	58	78	89
	23	36	62	79	92
	27	51	66	80	
Scale II:	4	32	45	59	73
	5	35	47	60	95
	8	37	48	61	
	28	40	53	63	
	29	44	54	71	

Scale III:	7	38	57	82	96
	17	39	64	83	97
	20	42	65	85	100
	31	43	69	87	
Scale IV:	3	16	41	74	98
	6	19	46	75	99
	9	22	50	76	
	11	24	68	93	
	13	34	72	94	
Scale V:	1	18	49	77	90
	2	21	55	81	91
	10	25	56	86	
	14	26	67	88	

Deriving total score. After the item ratings have been changed as described above, add all ratings to the left of items for the total score.

Score adjustment formula. If you have chosen to respond to items with the symbols "?" or "NA," it is necessary to use the following score adjustment formula. The score adjustment formula equalizes the scores of TSC's in which these symbols have been used, and the scores of TSC's in which these symbols have not been used. This formula assumes that the items receiving a numerical response are representative of the entire scale content. All items rated "NA" or "?" receive a score value of 0 in this formula.

$$\frac{\text{computed score for scale}}{\text{number of items not marked with a "?" or a "NA" on scale}} \times \text{Number of items in scale}$$

For example, in order to score Scale I, first reverse key items as explained above. After reverse keying the items, add up the total score (giving "?" and "NA" a scoring value of 0). If an individual has two "?'s," two "NA's" (all of which count as 0 towards the total score), five "2's," and ten "3's," the formula would be completed as follows:

$$\frac{\text{Actual computed score for scale}}{\text{Number of items not marked with "?" or "NA" on scale}} = \frac{40}{15} \times 19 \text{ (Number of items in scale)} \qquad \frac{40}{15} \times 19 = 51$$

The score for Scale I is therefore 51.

Likewise, the score adjustment formula for the total score is as follows:

$$\frac{\text{Actual computed score for entire TSC}}{\text{Number of items not marked with a "?" or "NA" on entire TSC}} \times \text{Number of items in TSC (100)}$$

For example, if an individual rates an institution using five "?'s," five "NA's," rating five items with a value of "1," ten items with a value of "2," twenty-five items with a value of "3," twenty-five items with a value of "4," and twenty-five items with a value of "5," the formula would be computed as follows (reverse keying the items):

$$\frac{325}{90} \times 100 = 361$$

Indications of Validity

Due to limited resources at this time, a full scale study of validity has not been possible. However, some indications of validity are available. During the item analysis study, respondents were asked to complete a subjective rating form (see Appendix A) on the same institution which was rated on the TSC. On this form, respondents were asked to indicate their subjective assessment of the institution's potential for successfully adopting educational innovations. On a scale of 1 - 4 (1 indicating no potential for innovation, and 4 indicating excellent potential for innovation), respondents were asked to provide an overall rating and 5 scale ratings. Each respondent's subjective ratings were then correlated with his/her TSC scores. These relationships were analyzed using a multitrait-multimethod matrix (Campbell & Fiske, 1959), and examined in terms of convergent and discriminant validity in order to explore the possiblity of any indications of validity.

In order to establish convergent validity, there must be a significant correlation between two different measures of the same trait. Discriminant validity requires that:

> The correlations between two different methods measuring the same trait exceed (a) the correlations obtained between that trait and any other trait not having method in common and (b) the correlations between different traits which happen to employ the same method. Variance among test scores can be due to method and/or trait factors. The multitrait-multimethod matrix presents all the intercorrelations which result when selected traits are measured by two or more methods (Borich & Bauman, 1972, p. 1031).

Because the subjective ratings were made by the same person who completed the instrument, this study does not qualify as a true validity study. However, since this comparison is the only data available upon which to base indications of validity, the data were analyzed as in a validity study.

Examining the four quadrant multitrait-multimethod matrix for the corre-

relations between TSC ratings and subjective ratings (see Table 4), there is evidence of convergent validity. As evidenced in Table 4, all of these correlations are significantly different from zero. These correlations, starting with Scale 1, through Total Score, are as follows: .776, .696, .757, .581, .357, and .858. Such correlations are indicative of the existence of convergent validity.

The first method of establishing discriminant validity is to determine if the values in the validity diagonal (see Table 4) are higher than the values in the corresponding rows and columns of the adjacent correlation triangles (heterotrait-heteromethod triangles). For example, when .776 (subjective Scale 1 with TSC Scale 1) is compared with the correlations <u>across</u> the quadrant (first row) and <u>down</u> the quadrant (first column), .776 is found to be higher than 4 out of the 10 correlations and approximately the same as one of the correlations. The rest of the correlations are as follows: .696 is higher than 3 correlations; .757 is higher than 5 correlations; .581 is higher than 6 correlations; .357 is higher than 9 correlations; and .855 (subjective overall rating with total TSC score) is higher than all 10 of its associated row and column correlations. Using this procedure, there are indications of discriminant validity only for Scales 5 and the Total instrument.

A second procedure used to establish discriminant validity requires that the values in the validity diagonal be higher than the triangles in the first and fourth quadrants (heterotrait-monomethod triangles). These triangles represent the common influence of the same method on the 5 scales and total scores. In other words, this second criterion requires that the trait variance should be larger than the method variance. As can be seen by examining the table, the first correlation, .776 (reading down the validity diagnoal) is higher than all 15 correlations in the heterotrait-monomethod triangle directly above the validity diagonal. This same coefficient (.776) compared to the heterotrait-monomethod

triangle in the fourth quadrant (subjective rating correlated with subjective rating) is higher than 5 out of 15 correlations. The remainder of the correlations are as follows: .696 is higher than 12 correlations in the first quadrant, and higher than 5 correlations in the fourth quadrant; .757 is higher than all 15 correlations in the first quadrant and higher than 5 correlations in the fourth quadrant; .581 is higher than 8 correlations in the first quadrant and higher than 5 correlations in the fourth quadrant; .357 is higher than 7 correlations in the first quadrant and lower than all correlations in the fourth quadrant; and, the last correlation in the validity diagonal, .855, is higher than all 15 correlations in the first quadrant triangle and higher than 6 out of 15 correlations in the fourth quadrant triangle. As evidenced in the table, all correlations in the fourth quadrant (subjective with subjective) except for Scale 5, were higher than the correlations in the validity diagonal of the third quadrant. Thus, using this method, there is not evidence of discriminant validity. However, the high intercorrelations among the subjective scales may indicate a unitary factor (see the discussion section).

A third criterion for the establishment of discriminant validity requires that the same pattern appear in all the trait-method triangles discussed above. As illustrated below, the four heterotrait (both monomethod and heteromethod) triangles do have similar patterns of correlations (high and low are, of course, relative to each triangle, since the focus is on pattern and not size of the correlations). The table below describes this pattern:

	1	2	3	4	5
1					
2	high				
3	high	high			
4	low	low	low		
5	low	low	low	low	
Total	high	high	high	high	low

Using this method of determining discriminant validity, it can be concluded that

an indication of discriminant validity does exist.

Discussion of Validity

In analyzing the results of this study, it should be emphasized that the above discussion is not a validity study in the usual sense. Instead, it is a study of the relationship between clinical subjective ratings of an institution's innovative potential (with respect to 5 areas of an institution's environment plus an overall rating) and the corresponding TSC ratings. In each of the 31 institutions included in the analysis, both sets of ratings were made by the same individual. A true validity study would have, of course, contained an independent set of subjective ratings of the same institution made by a different group of judges. In other words, in this correlational analysis the approach, of necessity, was limited to having the same raters use a different means to rate the same institution. In a true validity study, the instruments would not only be different, but the raters would be different.

Only one method of determining discriminant validity indicates validity (see method 3). The data suggests that the subjective scales do not discriminate in measuring all the factors of the TSC scales and instead, measure a single factor. The six ratings may be more reflective of a global attitude than of specific judgements of different aspects of an organizational environment due to the brevity of the subjective ratings. The possibility of a global attitude is buttressed by the fact that all of the correlations in the subjective with subjective quadrant (except 5) correlate highly (see the second method for determining discriminant validity). In some cases, specific subjective ratings correlated higher with other TSC scales than with their own scale (e.g., TSC Scale 1 correlated higher with subjective Scales 2 and 3 than with its own scale).

In sum, the results of the analyses of subjective ratings with TSC scores

are inconclusive. The similar patterns which emerged in the 3rd method of determining discriminant validity provide the only indications of discriminant validity. The fact that similar patterns emerge provides evidence against the hypothesis of a unitary factor. However, results of other methods of establishing discriminant validity as well as the higher intercorrelations of the fourth quadrant, suggest the possibility of a unitary factor. A true validity study must be conducted to determine whether a unitary factor exists, or whether the instrument demonstrates discriminant validity. The author invites others to complete such a study or contribute information towards such a study.

Finally, the student scale correlations (Scale 5) should be interpreted with caution. Many of the respondents reported that they were insufficiently familiar with the students to be confident about their ratings on this scale.

Content validity is evidenced in the development section of this manual, as well as in two other papers (Manning, 1974; Manning, 1975). The instrument is based on both research literature and change agent responses to questions focused on the information areas contained in this instrument. In addition, other professional researchers on the sponsoring project have offered their suggestions and critiques throughout the developmental process. Finally, organizational devlopment specialists contributed suggestions for revisions.

Table 4

CORRELATIONS BETWEEN TSC RATINGS AND SUBJECTIVE RATINGS

(N = 31)

		TSC Rating						Subjective Rating					
		Scale I	Scale II	Scale III	Scale IV	Scale V	Total Score	Scale I	Scale II	Scale III	Scale IV	Scale V	Overall Rating
TSC Rating	Scale I												
	Scale II	.656											
	Scale III	.642	.753										
	Scale IV	.300	.240	.320									
	Scale V	.156	-.008	.168	.366								
	Total Score	.650	.727	.754	.609	.198							
Subjective Rating	Scale I	.776	.817	.778	.692	.296	.801						
	Scale II	.822	.696	.748	.745	.318	.757	.911					
	Scale III	.808	.767	.757	.698	.244	.781	.906	.917				
	Scale IV	.475	.423	.371	.581	.452	.551	.925	.870	.852			
	Scale V	.126	.151	.231	.186	.357	.244	.364	.389	.381	.398		
	Overall Rating	.838	.806	.782	.794	.347	.855	.964	.959	.948	.947	.447	

Norms

The norms are based on a group of 32 individuals who would be likely users of the TSC. They all worked in higher-educational settings in roles of teachers, administrators, or change agents, and had an interest in the development of an instrument predictive of an organization's change potential. They filled out the instrument on an institution with which they were familiar, with the understanding that they would not have to identify themselves or the institution which they rated. A table of Percentile Equivalents for Higher Educational TSC scores is presented in Table 5. This table gives percentile ranks and their corresponding raw score values for all five scale and total scores. In addition, means, medians, standard deviations and standard errors of the means are presented for each of the five scales and total score.

Of course, norms based on an N of 32 have limited value, but they represent a beginning. The instrument appears to be internally consistent, and some indications of validity have been presented. Further use of the instrument seems to be warranted. The developer invites any institutions using this instrument to share their data, so that more extensive norms can later be published. It is, of course, also hoped that groups of institutions will generate their own norms.

Table 5

PERCENTILE EQUIVALENTS

FOR HIGHER EDUCATIONAL TSC SCORES

(N = 32)

Percentile Rank	Scale Score Values					
	I	II	III	IV	V	Total
100.00	85.00	101.00	85.00	100.00	82.00	438.00
96.9	83.00	98.00	82.00	99.00	78.00	437.50
93.8	82.50	97.00	81.00	96.00	75.00	437.00
90.6	82.00	96.50	80.50	95.00	74.50	427.00
87.5	78.00	96.00	80.00	92.50	74.00	418.00
84.4	77.00	94.50	78.00	90.00	73.00	417.00
81.3	76.00	93.00	77.50	89.00	72.00	410.00
78.1	75.00	92.50	77.00	85.00	71.50	391.00
75.0	74.00	92.00	76.00	84.00	71.00	390.00
71.9	73.00	91.50	74.00	83.00	70.00	388.00
68.8	71.00	91.00	73.50	82.00	68.50	374.00
65.6	70.00	90.00	73.00	81.00	67.00	373.00
62.5	69.00	89.00	72.50	79.00	66.00	372.00
59.4	67.00	86.00	72.00	78.00	65.00	368.00
56.3	65.00	83.00	71.00	77.00	64.00	367.00
53.1	64.66	82.00	69.00	76.00	63.00	363.00
50.0	64.33	81.00	68.34	74.50	62.00	360.00
46.9	64.00	80.00	67.67	73.00	58.00	357.00
43.8	63.25	79.00	67.00	70.00	54.00	355.00
40.6	62.50	78.00	66.00	68.00	52.00	347.00
37.5	61.75	77.00	64.00	66.00	51.00	339.00
34.4	61.00	75.00	63.00	62.00	49.50	324.00
31.3	68.00	72.00	54.00	61.00	48.00	300.00
28.1	53.00	69.00	49.00	59.00	47.00	274.00
25.0	46.00	63.00	48.00	57.00	46.00	250.00
21.9	45.50	59.00	47.00	53.00	45.50	248.00
18.8	45.00	58.66	44.00	49.50	45.00	243.00
15.6	44.50	58.33	42.00	46.00	44.00	234.00
12.5	44.00	58.00	38.00	44.00	42.00	233.00
9.4	43.34	52.00	36.00	42.00	39.00	224.00
6.3	42.67	50.00	35.00	40.00	27.00	216.00
3.1	42.00	47.00	34.00	36.00	26.50	208.00
0.0	41.00	46.00	33.00	35.00	26.00	207.00
Mean	63.94	79.28	64.06	71.91	57.94	340.44
Median	65.00	82.00	69.00	76.00	62.50	363.00
Std. Dev.	13.55	15.91	15.83	18.46	17.20	73.20
Std. Error of Mean	2.39	2.81	2.80	3.26	3.04	12.94

APPENDICES

APPENDIX A

SUBJECTIVE RATING SHEET

Subjective Rating Sheet

Please assign a rating of 1 - 4 for each of the following categories with respect to the department's potential for adopting innovations:

4 = excellent potential for innovation
3 = good potential for innovation
2 = limited potential for innovation
1 = virtually no potential for innovation

____ 1. Overall rating of department.

____ 2. Organizational Climate: This category focuses on the organizational climate of the department. Particular considerations should include the power system within the organization; the kinds of behaviors that are reinforced; organizational values and norms; and "openness" of the organization.

____ 3. Organizational Staff: This category focuses on personality and leadership characteristics of faculty and administrators as they are related to the successful adoption of innovations. In particular, this category is concerned with interaction between faculty members, between administrators, and between faculty and administrators. In addition, this category seeks to identify attitudes and interests of the faculty and administration as they are related to innovation.

____ 4. Communications: This category focuses on the communication process associated with successful adoption and implementation of innovations. Particular emphases should be placed on the degree to which information exchange is superficial, restricted, or productive. In addition, this category attempts to define the quality of communication between change agents (both internal and external) and the department.

____ 5. Innovative Experience: This category focuses on the experience and degree of sophistication that an institution has had with the adoption and implementation of innovations. Special concern should be placed on such factors as the degrees of awareness of basic information about innovations, and indications from the faculty that they have some idea how to integrate an innovation into their teaching.

____ 6. Students: This category focuses on characteristics of students which can affect the adoption-implementation process. In assessing these characteristics, students' attitudes towards the faculty, and their course work, are considered to be crucial, as well as enthusiasm, student interaction with peers and faculty, and student individuality.

APPENDIX B

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APPENDIX C

TABLES

Table 1*

Each item correlated with score of own scale (innovative/noninnovative) and with total score of instrument.

Item Number	Items classified as innovative correlated with total score of all items classified as innovative		Items classified as non-innovative correlated with total score of all items classified as non-innovative	
	R (Scale)	R (Total)**	R (Scale)	R (Total)**
1			.7419	.6724
2			.5204	.5127
3	.6674	.6099		
4	.5817	.6479		
5	.8172	.8203		
6			.7839	.8044
7	.5067	.5462		
8			.5568	.5936
9	.6545	.7231		
10	.5097	.4712		
11			.7248	.7402
12			.5724	.5673
13			.6744	.6137
14	.7775	.7657		
15			.3447	.3808
16	.3416	.2232		
17			.7190	.6873
18			.5891	.6273
19	.3711	.3922		
20			.6068	.6692
21			.6567	.6436
22			.6350	.6330
23	.5943	.6432		
24	.5586	.5399		
25	.5748	.5149		
26	.5554	.5239		
27	.7083	.6672		
28			.7997	.7980
29	.5249	.4771		
30	.5731	.5820		
31			.7556	.7142
32			.6862	.6643
33	.6724	.6636		
34	.6482	.6855		
35	.5274	.6029		
36	.5634	.6111		
37			.3639	.3895
38	.8186	.8208		
39			.7008	.6880
40			.5808	.5122
41	.7681	.7936		
42	.6891	.6715		
43			.4707	.5261
44			.3762	.4103
45	.3927	.4137		
46	.6317	.5627		
47	.7159	.7357		
48			.6662	.6135
49			.5283	.4945
50			-.4271	-.4051

*This table includes information only on the final 100 items selected.

** Total score was obtained by inverting responses to the noninnovative items.

TABLE 1 (cont.)

Item Number	Items classified as innovative correlated with total score of all items classified as innovative		Items classified as non-innovative correlated with total score of all items classified as non-innovative	
	R (Scale)	R (Total)	R (Scale)	R (Total)
51	.5373	.5189		
52	.7855	.7775		
53	.3662	.3886		
54			.7365	.7932
55	.4621	.3472		
56			.4132	.3442
57			.4563	.4705
58	.5089	.4588		
59			.7331	.6471
60			.6531	.6319
61			.6131	.5513
62	.7160	.7404		
63	.7101	.6789		
64	.3942	.3397		
65			.8188	.8319
66			.5295	.5159
67	.5270	.5176		
68			.5688	.5249
69	.3462	.2651		
70	.4553	.4271		
71			.5388	.5305
72	.5496	.5469		
73			.5073	.5345
74	.6982	.6747		
75			.6124	.5524
76	.5660	.5480		
77			.7868	.7265
78			.8480	.8378
79			.7881	.7293
80			.5891	.6271
81			.3390	.3651
82			.5072	.4957
83	.5451	.5662		
84			.3615	.2984
85	.7045	.6866		
86			.5968	.5743
87	.8296	.8630		
88			.8947	.9170
89			.4802	.5844
90	.7581	.7278		
91	.5486	.5138		
92	.5588	.4476		
93			.7245	.6742
94			.4607	.3986
95			.7932	.7842
96			.7477	.7754
97			.4280	.4386
98			.4472	.3987
99	.6841	.6757		
100	.6493	.6167		

TABLE 2*
Each Item Correlated With Total Scale Scores for Five Scales.

Item Number	Scale Number	Scales 1	2	3	4	5
1	1	776	577	598	702	266
2	2	551	429	467	706	9
3	4	517	548	525	694	390
4	1	710	569	538	670	351
5	3	762	776	825	699	567
6	3	747	840	742	758	448
7	1	652	574	494	512	134
8	4	561	649	466	592	349
9	4	755	679	733	808	117
10	3	429	501	422	454	266
11	3	710	667	769	643	472
12	1	508	554	601	523	295
13	4	659	493	610	639	261
14	4	707	700	658	842	446
15	5	318	376	281	349	393
16	5	105	133	171	59	638
17	3	741	630	670	760	148
18	2	548	634	574	498	557
19	5	296	387	330	149	691
20	2	545	645	598	591	616
21	3	650	597	728	532	304
22	2	610	670	591	589	315
23	3	526	706	689	550	355
24	2	602	535	401	512	337
25	5	415	413	364	515	627
26	5	429	394	447	378	763
27	4	554	604	620	755	379
28	3	753	729	830	728	461
29	2	356	572	529	294	387
30	5	491	592	470	541	508
31	1	679	681	713	608	475
32	4	620	661	641	692	271
33	2	556	724	628	468	611
34	1	728	661	552	721	334
35	4	638	530	571	721	118
36	2	571	713	655	497	234
37	2	418	473	386	311	110
38	3	720	811	890	766	393
39	2	677	711	638	598	412
40	4	611	394	466	638	69
41	4	800	777	786	761	332
42	2	552	764	614	651	369
43	1	401	513	545	390	517
44	1	377	421	518	339	118
45	1	591	417	342	416	4
46	3	535	506	519	503	437
47	2	679	686	731	756	353
48	4	638	556	638	742	23
49	5	467	391	465	416	475
50	1	-426	-446	-458	-266	-185

*This table includes information only on the final 100 items selected.

TABLE 2 (cont.)
Each Item Correlated With Total Scale Scores for Five Scales.

Item Number	Scale Number	Scales 1	2	3	4	5
51	1	484	549	534	437	275
52	2	623	784	716	664	689
53	1	506	317	199	366	359
54	4	670	825	803	742	439
55	5	157	243	375	218	628
56	2	554	393	296	365	-174
57	2	358	482	556	371	308
58	1	423	443	366	454	350
59	1	754	570	626	694	135
60	4	650	595	624	670	188
61	2	703	513	480	620	36
62	3	708	750	777	677	314
63	2	600	717	635	571	494
64	5	168	233	379	211	587
65	2	751	784	764	799	576
66	3	460	486	517	476	334
67	3	384	520	648	432	280
68	4	560	483	387	687	138
69	5	107	197	339	86	523
70	2	332	462	329	306	527
71	3	478	565	533	411	368
72	4	581	420	599	554	209
73	5	423	533	445	332	733
74	4	550	651	567	709	506
75	4	600	510	446	722	78
76	4	454	395	471	693	382
77	3	790	646	673	742	308
78	2	786	794	828	784	486
79	1	790	685	586	747	390
80	5	482	594	612	478	666
81	5	300	340	274	166	644
82	2	520	527	444	443	243
83	5	550	437	423	516	633
84	3	328	230	394	313	-7
85	4	566	632	579	592	727
86	4	560	486	488	606	386
87	1	815	795	781	828	591
88	4	837	878	904	871	535
89	4	543	525	448	625	447
90	1	623	666	764	721	407
91	5	409	433	474	366	667
92	2	334	396	337	316	694
93	3	697	695	730	559	257
94	1	360	456	420	286	244
95	1	775	765	831	670	392
96	3	670	747	751	743	503
97	5	344	451	328	253	668
98	5	378	345	323	383	350
99	3	578	632	728	623	402
100	2	536	688	604	543	342

TABLE 3*

Each Item Correlated With Total Score of Instrument and Total Scale Score.

Item Number	R (Scale)	R (Total)	Item Number	R (Scale)	R (Total)
1	.7759	.6724	51	.4840	.5189
2	.4291	.5127	52	.7844	.7775
3	.6944	.6099	53	.5058	.3886
4	.7097	.6479	54	.7421	.7932
5	.8246	.8203	55	.6279	.3472
6	.7418	.8044	56	.3932	.3442
7	.6524	.5462	57	.4824	.4705
8	.5919	.5936	58	.4225	.4588
9	.8084	.7231	59	.7535	.6471
10	.4224	.4712	60	.6695	.6319
11	.7688	.7402	61	.5132	.5513
12	.5080	.5673	62	.7774	.7404
13	.6394	.6137	63	.7165	.6789
14	.8416	.7657	64	.5868	.3397
15	.3933	.3808	65	.7843	.8319
16	.6379	.2232	66	.5166	.5159
17	.6698	.6873	67	.6479	.5176
18	.6342	.6273	68	.6866	.5249
19	.6910	.3922	69	.5233	.2651
20	.6452	.6692	70	.4619	.4271
21	.7282	.6436	71	.5334	.5305
22	.6703	.6330	72	.5537	.5469
23	.6894	.6432	73	.7325	.5345
24	.5349	.5399	74	.7092	.6747
25	.6268	.5149	75	.7221	.5524
26	.7634	.5329	76	.6933	.5480
27	.7549	.6672	77	.6733	.7265
28	.8297	.7980	78	.7938	.8378
29	.5725	.4771	79	.7905	.7293
30	.5083	.5820	80	.6658	.6271
31	.6792	.7142	81	.6442	.3651
32	.6916	.6643	82	.5267	.4957
33	.7245	.6636	83	.6332	.5662
34	.7284	.6855	84	.3937	.2984
35	.7214	.6029	85	.5923	.6866
36	.7126	.6111	86	.6065	.5743
37	.4729	.3895	87	.8146	.8630
38	.8902	.8208	88	.8714	.9170
39	.7108	.6880	89	.6253	.5844
40	.6385	.5122	90	.6235	.7278
41	.7607	.7936	91	.6666	.5138
42	.7638	.6715	92	.6942	.4476
43	.4007	.5261	93	.7301	.6742
44	.3773	.4103	94	.3596	.3986
45	.5906	.4137	95	.7751	.7842
46	.5185	.5627	96	.7510	.7754
47	.6864	.7357	97	.6681	.4386
48	.7417	.6135	98	.3504	.3987
49	.4746	.4945	99	.7284	.6757
50	-.4261	-.4051	100	.6882	.6167

*This table includes information only on the final 100 items selected.

APPENDIX D

THE "TROUBLE SHOOTING" CHECKLIST (TSC)

FOR HIGHER-EDUCATIONAL SETTINGS

(Instrument)

The "Trouble Shooting" Checklist (TSC)
For Higher-Educational Settings

Introduction and Instructions

The TSC consists of 100 Likert-type items describing departmental characteristics. These items are randomly arranged and can be broken into five scales focusing on particular organizational variables which affect the adoption-diffusion process. The history of the development of the instrument is included in the manual, as well as information on uses of the TSC, scale titles, numbers of items in each scale, and scoring instructions.

The respondent is asked to rate whether or not an item is descriptive (typical/atypical) of a particular department. Although there are descriptive statements about individuals outside of the department (such as the dean), the statements, nevertheless, focus on such persons in relation to the department. The department being rated should always be the first point of reference.

The term change agent is used frequently throughout the instrument. This term is used broadly and includes both external change agents (individuals brought in from outside the department specifically to facilitate change) and internal change agents (facilitators of change who are permanent members of the department). The role of the change agent may range from assisting a department in problem-solving by giving of their own professional expertise, to providing contacts with all available resources, to actually taking part in decisions to adopt innovations and aiding in the implementation of adopted innovations. It is also assumed that the department you are rating is at least considering the adoption of one or more innovations (as reflected in items referring to "innovation").

In order to complete the instrument, merely rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating and record your ratings on the line directly to the left of the item.

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical

In addition, you may use one of the following two ratings:

1. If the item is applicable to the department you are rating but you do not know the information, use the symbol "?."
2. If the item is not applicable to the particular department you are rating, use the symbol "NA."

The "Trouble Shooting" Checklist (TSC)
For Higher-Educational Settings

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 1. The students complain that the courses are unrelated to their personal and/or professional goals.

____ 2. Students' ideas have been acted on in the past.

____ 3. The faculty are not able to talk about the substance of particular innovations, though they may be able to name some innovations.

____ 4. The faculty do not systematically seek out approaches outside of their orientation.

____ 5. The department chairperson appears uncomfortable when changes in the department are discussed.

____ 6. The few faculty members who appear to be innovative do not communicate well with the rest of the faculty.

____ 7. It will be necessary to convince a doubting faculty of the administration's interest in innovation.

____ 8. The department chairperson is concerned with current developments relevant to an innovation under consideration for adoption.

____ 9. All of the faculty members seem equally involved in increasing the level of use of previously adopted innovations.

____ 10. The students are in frequent contact with one another (e.g., in seminars, in the field, in the learning resource center, etc.).

____ 11. There are only a few faculty members who are trying to arouse interest in actual trial testing of an innovation.

____ 12. Members of the department take responsibility for their decisions and actions.

____ 13. This department is only interested in the expenditures associated with adoption of particular innovations.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 14. The students in this department read suggested materials in addition to the required reading assignments.

____ 15. The faculty ask reflective and/or analytical questions about the adoption/implementation process.

____ 16. This department has developed many of its own products.

____ 17. Communications between a change agent and the department focus on how new practices aid in effective teaching.

____ 18. The students are not well acquainted with each other.

____ 19. The department is involved with the successful adoption of other innovations.

____ 20. Communications concerning innovation have all been enthusiastic and positive.

____ 21. The students realistically assess their needs.

____ 22. The faculty members who have some interest in innovation have no prestige or tenure in the department.

____ 23. This department gives the faculty financial support for educational expenses related to the adoption of innovations.

____ 24. Although material on innovations is mentioned by the faculty from time to time, it has probably not been read by anyone.

____ 25. The students claim that they are intellectually challenged by changes which have been made in the department's teaching approach.

____ 26. The students take initiative in seeking out challenging course work.

____ 27. Some of the faculty are asking for detailed information about the mechanics of using an innovation.

____ 28. Members of the faculty have refused to discuss even the possibility of taking on new roles within the department.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 29. There is a small faculty faction trying to replace the department chairperson.

____ 30. The supporters of innovation are not normally the initiators of communications within this department.

____ 31. The faculty receives most communications from administrators by way of memo.

____ 32. The faculty members arrive at school late and leave early.

____ 33. The change agent working at this department is not in a position of authority.

____ 34. This department does not hire faculty who have had experience in developing innovations.

____ 35. The faculty listen to the suggestions and ideas of students.

____ 36. The supporters of innovation have serious communication problems with the faculty at large.

____ 37. The dean is unaware of recent changes which have been made within this department.

____ 38. Communications between department members and change agents result in constructive actions within the department.

____ 39. This department feels comfortable communicating often with change agents.

____ 40. The faculty is warm and personable.

____ 41. Faculty members of this department have already established general strategies for implementing innovations.

____ 42. Some members of the department have made efforts to communicate with recognized experts in their subject areas.

____ 43. This department has thus far made only minimal efforts in seeking out assistance in making changes.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating, or use one of the alternative symbols:

5 = very typical
4 = somewhat typical
3 = neither typical nor atypical
2 = somewhat atypical
1 = very atypical
NA = not applicable
? = no information at this time

____ 44. The dean is not assertive in establishing goals.

____ 45. Members of the faculty have stated that they are more concerned with effective teaching than advancement in the department hierarchy.

____ 46. This department is unaware of basic information about innovations.

____ 47. The department chairperson uses many cliches (e.g., why change for the sake of change? before we buy any program, we must establish a sound philosophical base, etc.).

____ 48. The dean acts as a hindrance to the adoption of innovations.

____ 49. The students are constantly exposed to new ideas in their courses.

____ 50. This department uses resource materials effectively to develop its own materials.

____ 51. The faculty frequently raise the issue of "standards."

____ 52. The faculty makes no attempt to encourage more student involvement.

____ 53. The faculty members frequently discuss how their interpersonal relationships with their colleagues affect the functioning of their programs.

____ 54. Members of the faculty freely discuss with each other the problems that they have in their day to day work.

____ 55. The students talk only about "getting through" their courses.

____ 56. The students have many shared experiences outside of the department.

____ 57. Very few faculty members communicate with other faculty outside their department about their work.

____ 58. There is much discussion about the impact of innovations on the education of students.

____ 59. The faculty members express a desire to increase their understanding of both themselves and others.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating, or use one of the alternative symbols:

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____ 60. The department has no recognized leadership.

____ 61. Some of the faculty may already be committed to traditional teaching methods.

____ 62. The administration is concerned with adopting a program which will best meet the students' educational needs.

____ 63. There is a willingness to initiate needed change.

____ 64. Most innovation-related communications between faculty members consist of remarks about the financial situation and philosophical bases.

____ 65. This department often does not respond to communications from change agents.

____ 66. Individual members of the department are not in a position to reinforce each other.

____ 67. The students relate to faculty members only in the classroom.

____ 68. Innovation supporters and non-supporters have emerged in the form of in- and out-groups.

____ 69. Change agents and the department have established a comfortable rapport over a period of time.

____ 70. The department chairperson strongly supports change efforts (e.g., through public statements, promotion rewards, provision of resources, etc.).

____ 71. The faculty members meet often to exchange ideas with one another.

____ 72. The faculty is actively developing innovations.

____ 73. The department chairperson does not respond to requests from the faculty.

____ 74. The faculty members ask questions about how innovations can bring about specific changes in their department.

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____ 75. There has been little reinforcement from the department for fully implementing adopted innovations.

____ 76. Many of the faculty, while not actively opposed to innovation, will not commit themselves.

____ 77. The students praise their program for the interrelatedness of its courses.

____ 78. Older faculty members discourage younger faculty members from remaining in the department.

____ 79. The administration listens to dissenting views.

____ 80. The only action in this department consists of classes and scheduled office hours.

____ 81. The classes in this department are relatively large.

____ 82. Some individual faculty members are using an innovation comfortably.

____ 83. Interested faculty members are in frequent communication with change agents.

____ 84. The structure of the organization includes reasonably well-functioning communication channels.

____ 85. Any initiative taken by change agents in this department is considered harassment by the rest of the department.

____ 86. The students complain that their courses lack interrelatedness.

____ 87. Faculty members have made only one or two inquires about innovations.

____ 88. The students are encouraged to develop their own styles.

____ 89. The dean has worked with the faculty in the past in their efforts to implement innovations.

Please rate on a 1 - 5 scale (as indicated below) how closely each item describes the department you are rating, or use one of the alternative symbols:

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____ 90. The students are excited about innovative approaches which compliment their individual learning styles.

____ 91. The students feel frustrated and/or disillusioned because of a lack of "standards" in their field.

____ 92. The leadership in key positions rewards conformity.

____ 93. The faculty is threatened by new approaches.

____ 94. This faculty is actively seeking information on innovations.

____ 95. The department chairperson is primarily concerned with the quality of instruction.

____ 96. It is difficult for a change agent to contact key persons within this department.

____ 97. The faculty only weakly endorses any basic change within the department.

____ 98. The faculty does not need to be proded into using innovative approaches.

____ 99. In the past, faculty interest in an innovation has resulted in early plans for pilot testing of that innovation.

____100. Communications between a change agent and this department do not focus on real issues or problems.